

EMERGENCY

If your dam is in danger of failing due to structural deficiencies or severe flood conditions and poses a life-threatening emergency, you may proceed with the necessary repairs or breaching *without* the previously described construction permit. *DNRC must be notified immediately of any proposed emergency repairs or breaching.* If you fail to act, DNRC may take any action necessary to safeguard downstream life and property. Costs incurred by DNRC's action during an emergency must be paid by the owner of the dam.

CIVIL PENALTY

A civil penalty of up to \$1,000 per day can be assessed against you, as a dam owner, if you are not in compliance with the Montana Dam Safety Act.

COMPLAINTS - UNSAFE DAM OR RESERVOIR

If you have a concern that life or property is being endangered by a dam, regardless of the capacity of the reservoir, you can file a complaint by submitting an affidavit to DNRC. DNRC may then inspect or order an inspection of the dam unless the data, records, and inspection reports are adequate to determine that the complaint has no merit.

If the inspection discloses defects in the dam or res-

ervoir that, in the judgment of DNRC, constitute an immediate hazard to life or property, DNRC may order draining the reservoir, limiting its use, or taking other steps to make the dam safe. DNRC may require the owner to pay all or part of the inspection expenses.

LAWS, RULES, AND FORMS

For copies of the Montana Dam Safety Act, the administrative rules, or application forms, you may write or call DNRC at the address below.

OTHER INFORMATION

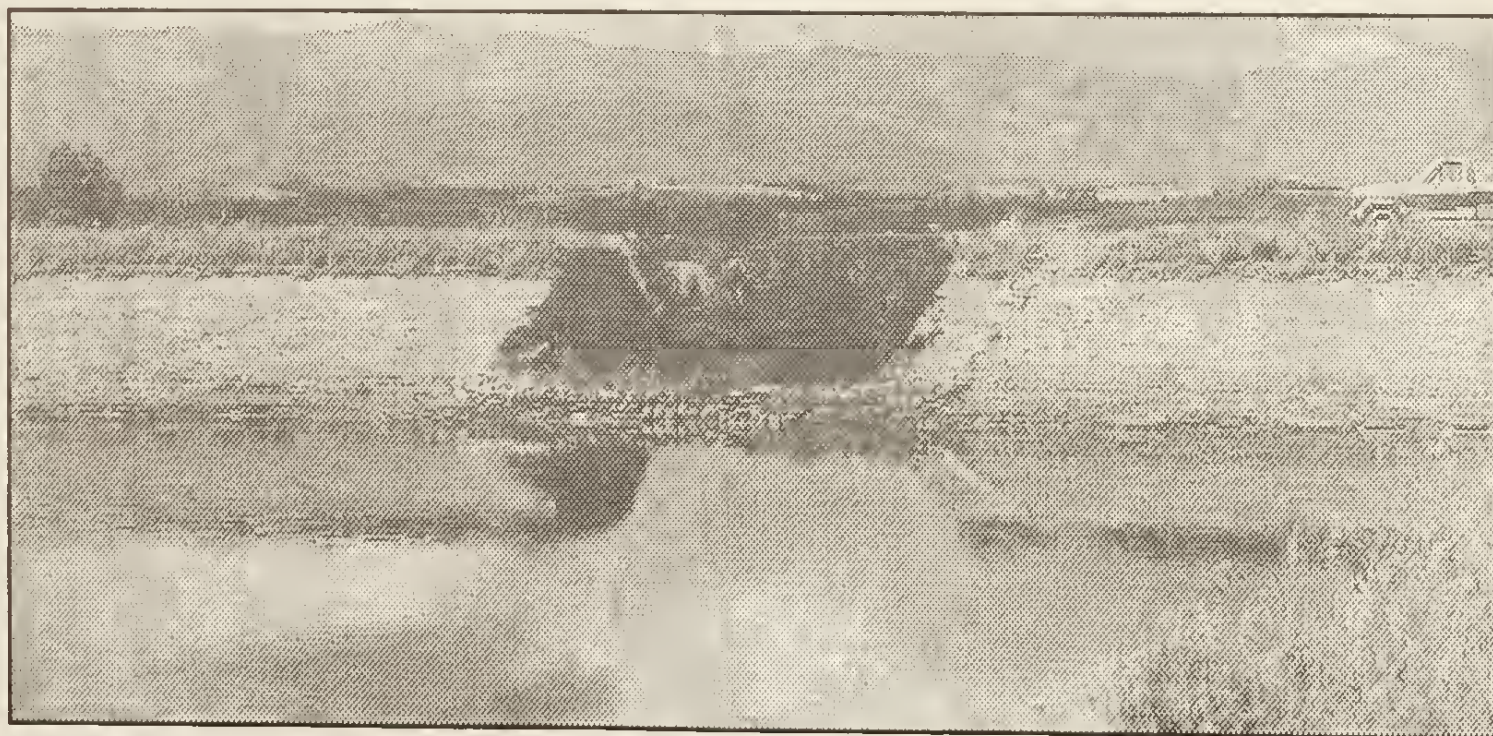
Numerous publications are available concerning inspection guidelines, emergency and early warning plans, and other areas that may be of interest or assistance to owners of dams. Contact DNRC for more information.

MONTANA DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
WATER RESOURCES DIVISION
DAM SAFETY PROGRAM
48 NORTH LAST CHANCE GULCH
P.O. BOX 201601
HELENA, MT 59620-1601
(406) 444-0860

*Persons with disabilities who need an alternative, accessible format of this document should contact
DNRC at the address above.*

Phone: 406-444-0860/Fax: 406-444-0533/TDD: 406-444-6873.

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Classic failure of an earthen dam.

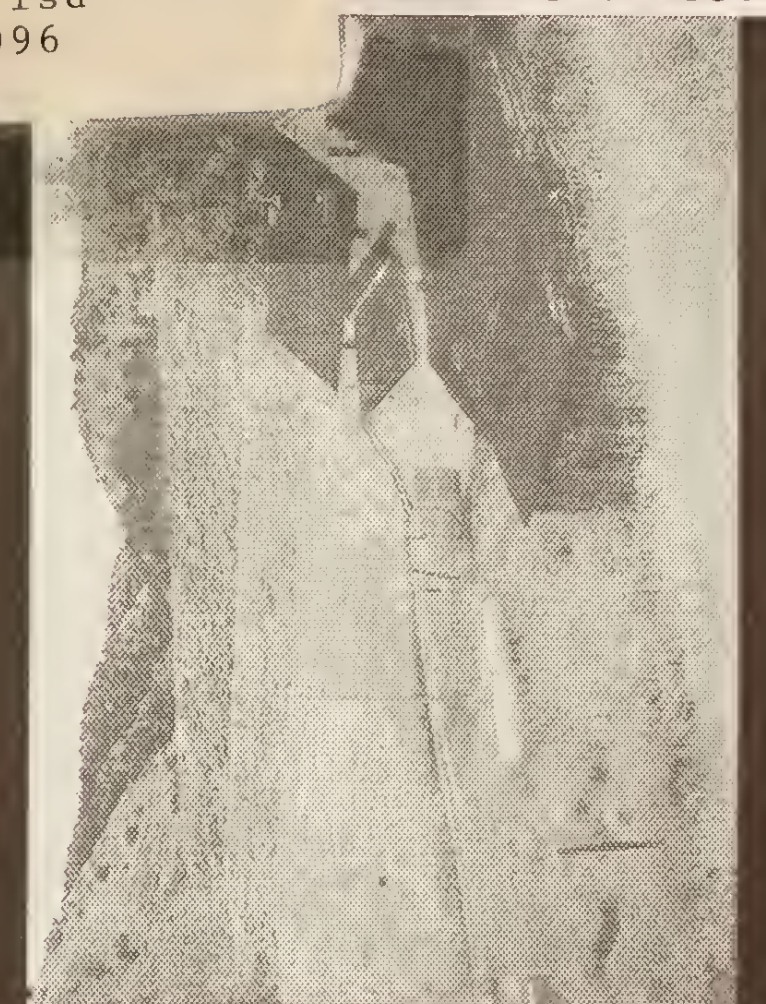
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IS YOUR DAM
ABOVE HOMES,
HIGHWAYS,
OR OTHER
STRUCTURES?

DO YOU OWN OR PLAN TO BUILD A DAM ABOVE HOMES, HIGHWAYS, OR OTHER STRUCTURES?

If you own or plan to build a dam, you need to know whether that dam presents a hazard to the people and property downstream. A *high-hazard* dam is any dam that impounds 50 acre-feet of water or more and could cause loss of life downstream if it fails. High-hazard is not a reference to the dam's condition, but rather the potential for the loss of life downstream if the dam were to fail.

Montana has over 3,500 dams that impound 50 acre-feet of water or more. Of these dams, approximately 150 are classified as high-hazard; that is, if any one of these dams fails, there is a potential for loss of life downstream.

MONTANA'S DAM SAFETY LAW

A substantial number of lives and amount of property depend on safe dams. Therefore, in 1985, Montana became one of 48 states to adopt regulations for high-hazard dams. The Montana Dam Safety Act provides for a permitting process to require that construction, maintenance, and operation of high-hazard dams are conducted in a safe manner.

If your dam is high-hazard, it is beneficial to be in compliance with Montana's Dam Safety Act. Once a high-hazard dam is permitted under the act, the dam's owner is not, in the absence of negligence, liable for damages resulting from discharges from the dam or reservoir that exceed the 100-year flow. This provision reduces your risk of liability as a high-hazard dam owner.

Exempt from the Dam Safety Act are dams that are

owned by the federal government, inspected by the Federal Energy Regulatory Commission, included in a mine operating permit issued by the Montana Department of Environmental Quality, or associated with facilities certified under the Major Facility Siting Act. Private dams on federal property, including dams on U. S. Forest Service property, are also exempt. These dams are already required to meet safety standards established by other state or federal law and are exempt to prevent dual jurisdiction or conflicting standards.

HAZARD CLASSIFICATION

To build a new dam or alter an existing dam, either of which has an impoundment capacity of 50 acre-feet or more, you must apply to the Department of Natural Resources and Conservation (DNRC) for a hazard classification. The *impoundment capacity* is measured to the maximum normal operating pool, which is usually the crest of the spillway. The requirements for hazard classification also apply to flood control structures that have the potential for impounding 50 acre-feet or more.

The determination of hazard involves an evaluation of the area downstream from the dam that would be flooded if the dam fails. If the flood would likely cause a loss of life, the dam is classified as a high-hazard structure. The hazard classification is based on the potential loss of life downstream; *it is not an assessment of the safety of the structure*. DNRC will make a hazard classification determination within 60 days after a complete application is received. The cost of the determination is \$125.



Rehabilitation construction on Petrolia Dam (1996)

CONSTRUCTION PERMIT

If it is determined that your dam has a high-hazard potential downstream, a construction permit is necessary before construction. *Construction* includes construction of a new high-hazard dam or major repair, alteration, enlargement, or removal of an existing high-hazard dam. An application for a construction permit must be accompanied by construction plans and specifications, and an engineering design report. The plans, specifications, and report must be prepared by a licensed professional engineer experienced in dam design and construction. Within 60 days of receiving a completed application, DNRC will issue or deny a construction permit. There is no fee associated with a construction permit application.

A construction permit is not required for performing minor and routine repairs, maintenance, or emergency repairs on a high-hazard facility.

OPERATION PERMIT

You need to obtain an operation permit from DNRC if you own or plan to own a high-hazard dam. An operation permit application must include an operation plan and an engineer's inspection report. The permit is effective for a period of no longer than 5 years, after which it must be renewed. The *operation plan* consists of reser-

voir operation procedures, maintenance procedures for the dam and appurtenant works, and emergency procedures. The plan must be updated whenever the permit is renewed. Preparation of and adherence to the plan will aid in the safe operation and maintenance of the high-hazard dam. A more detailed description of an operation plan can be found in Administrative Rules of Montana Chapter 36.14.101-803. A sample operation plan is available from DNRC.

A periodic inspection of the high-hazard dam is necessary when the operation permit is first applied for or renewed. The minimum frequency for inspection is stated in the operation permit and is at least once in five years. The inspection must be arranged by the dam owner and conducted by a licensed professional engineer. A report of the inspection must accompany the permit application.

If, after reviewing the application, operation plan, and inspection report, DNRC determines that your high-hazard dam meets or exceeds minimum safety standards and can be safely operated and maintained, an operation permit is issued. There is no fee associated with an operation permit application. DNRC will issue or deny the permit within 90 days after receiving a complete application.



Slope instability at the toe of a dam

All photos taken by Dam Safety Program staff.